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Experience and Meaning

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Source: *The Philosophical Review*, Mar., 1934, Vol. 43, No. 2 (Mar., 1934), pp. 125-146

Published by: Duke University Press on behalf of *Philosophical Review*

Stable URL: <https://www.jstor.org/stable/2179891>

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## EXPERIENCE AND MEANING\*

**E**VER since the provisional skepticism of Descartes' First Meditation the attack upon any problem of reality has always been shadowed by the question "How do you know?". The extent to which this perennial challenge has determined the course of modern philosophy requires no exposition. That on the whole the results of it have been salutary will hardly be denied; though it may be said—and has been said—that it leads, on occasion, to the confusion of methodological considerations with positive conclusions. The last thirty-five years have witnessed a growing emphasis upon another such challenge, which bids fair to prove equally potent in its directing influence. This is the question "What do you mean?", asked with intent to require an answer in terms of experience. That is, it is demanded that any concept put forward or any proposition asserted shall have a definite denotation; that it shall be intelligible not only verbally and logically but in the further sense that one can specify those empirical items which would determine the applicability of the concept or constitute the verification of the proposition. Whatever cannot satisfy this demand is to be regarded as meaningless.

For any sufficient consideration of this empirical-meaning requirement it would be essential to sketch those developments which have brought it to the fore: pragmatism and the "pragmatic test"; neo-realism, both of the American school and the similar view of Russell; the new methodology in physics which came in with relativity, especially Einstein's treatment of definition and Bridgman's operational theory of the concept; Whitehead's method of "extensive abstraction", by which certain previously refractory concepts can now be defined in terms of the actually observable and their empirical content thus made evident. Last and most particularly, one would mention the logical positivism of the Vienna Circle, whose program is based throughout upon this consideration of empirical meaning. It would likewise be desirable to consider the divergences between these different movements of thought in their interpretation of the general requirement of empirical meaning.

\* The presidential address to the eastern division of the American Philosophical Association at Amherst College, December 29, 1933.

But before this audience it will be unnecessary to attempt any such survey, either of this development in current theory or of the points of divergence with respect to it. Taking these matters for granted, the purpose of what follows will be to explore a little certain questions concerning the limitations imposed upon significant philosophic discussion by this requirement of empirical meaning; in particular certain issues which are likely to divide those who approach these problems with the thought of James and Peirce and Dewey in mind from the logical positivists. The ultimate objective of such discussion would be to assess the bearing of this limitation to what has empirical meaning upon ethics and the philosophy of values, and upon those metaphysical problems which concern the relation between values and reality. But that objective cannot be reached in the present paper, which will be concerned with prior questions. Even these cannot be set forth with any thoroughness; and I hope it will be understood that the purpose of this discussion is to locate issues rather than to dispose of them, and that criticisms ventured are not put forward in the spirit of debate.

The Vienna positivists repudiate all problems of traditional metaphysics, including the issue about the external world supposed to divide idealists from realists, and any question concerning the metaphysical character of other selves. In the authoritative statement of their position we find the following: "If anyone assert 'There is a God', 'The ground of the world is the Unconscious', 'There is an entelechy as the directing principle in the living', we do not say to him 'What you assert is false' but instead we ask him 'What do you mean by your statement?'. And it then appears that there is a sharp line of division between two kinds of propositions. To the one belong statements such as those made in the empirical sciences: their meaning can be determined by logical analysis; more specifically, it can be determined by reduction to statements of the simplest sort about the empirically given. The other class of propositions, to which those mentioned above belong, betray themselves as completely empty of meaning, if one take them in the fashion which the metaphysician intends. . . . The metaphysician and the theologian, misunderstanding themselves, suppose that their theses assert something, represent mat-

ters of fact. Analysis shows, however, that these propositions assert nothing, but only express a sort of feeling of life."<sup>1</sup> According to Carnap all value-theory and normative science are likewise without meaning, in the theoretical or empirical sense of that word.<sup>2</sup>

The expression of such feeling of life, and of our evaluative reactions, is, of course, admitted to be a legitimate and worth-while activity; but, as such expression, metaphysical theses are to be classed with art and poetry. Obviously there is room in such a theory for descriptive ethics, on a psychological or sociological basis, and for the determination of values by reference to a norm which is assumed or hypothetical; but traditional questions of the 'objectivity' of value are repudiated. We may meaningfully ask "When is a character judged good?" or "What is actually approved?", but not "With *what right* is this character said to be 'good'?" or "What is absolutely *worthy* of approbation?"<sup>3</sup>

This repudiation of metaphysics and normative science by the logical positivists cannot, I think, be regarded as an implication of the empirical-meaning requirement alone. At least an important light is thrown upon it by taking into account that "methodological solipsism" in accordance with which their program is developed. Even though they regard this procedure as advantageous rather than prescribed, still the negations or limitations which characterize it seem to underlie their theses, in whatever terms expressed.

On its constructive side this method means no more, at bottom, than a persistent attempt so to define the different classes of objects of our knowledge that the basis of this knowledge in direct experience will be exhibited. It is of the essence of knowledge that it is in the first person. Your mind and your experience can be nothing more, for my cognition, than a construction which I put upon certain data of my own experience. If, then, we are to have a thorough and completed account of knowledge, it is not sufficient that the constitution of objects known should be traced back

<sup>1</sup> *Wissenschaftliche Weltauffassung des Wiener Kreises* (1929) 16. (I have translated somewhat freely.)

<sup>2</sup> "Auf dem Gebiet der Metaphysik (einschliesslich aller Wertphilosophie und Normwissenschaft) führt die logische Analyse zu dem negativen Ergebnis, dass die vorgeblichen Sätze dieses Gebietes gänzlich sinnlos sind." "Überwindung der Metaphysik durch logische Analyse der Sprache", *Erkenntnis* II (1931) 220.

<sup>3</sup> See M. Schlick. *Fragen der Ethik*, esp. I 8 pp. 10-12.

to experience in the merely generic sense. So far as your observations and reports enter into the construction of that reality which is known to me, they can do so only through the interpretation which I put upon certain modes of your behavior perceived by me. Actually given experience is given in the first person; and reality as it is known in any case of actual knowledge can be nothing, finally, but a first-person construction from data given in the first person.

Consonantly, we have such construction of the objects of science in general as is outlined in Carnap's *Logischer Aufbau der Welt*: first, the different kinds of for-me entities (*eigenpsychische Gegenstände*) which are constructed out of elementary experiences (*Elementarerlebnisse*), at bottom, through the relation of remembered similarity (*Ähnlichkeitserinnerung*); second, physical objects, which are constructions out of the simpler for-me things of actually given experience; third, other selves and the mental or cultural in general (*fremdpsychische und geistige Gegenstände*), which are, for actual knowing, constructions out of certain classes and certain relationships of physical things and processes.

In this program we have a consistently maintained effort to be true to the nature of knowledge as we find it. The egocentric predicament is taken seriously; and the "solipsistic" character ascribed to knowing is no more strange or fantastic than Kant's transcendental unity of apperception. The manner in which the *negative* side of logical positivism is related to this same method may, perhaps, be more readily appreciated by reference to cruder but somewhat parallel considerations which are suggested by Berkeley's argument against material substance. (It was Berkeley who first adduced the requirement of empirical meaning in order to prove his opponent's concepts empty and non-significant.)

As has often been noted, the significance and applicability of Berkeley's argument does not leave off at the point where he ceases to use it. By identical logic other selves and the past and future must go the same way as material substance. If you are more than one of my ideas, how can I know it? How can I consistently suppose that I even have an interest in that untouchable you outside my mind which *ipso facto* could make no difference in my experience of you? Also, at this moment, what is that past **which I remember**, as more than the present recollection, or the

future as more than the present experience of anticipation? All must finally dissolve into the eternal now of actually given experience.

There is even one further step for this logic to take. What am I? This self as a recognizable or conceivable particularity can be no more than one of those ideas I call mine. And Wittgenstein gives indication that he accepts the parallel methodological implication: "The subject does not belong to the world but it is the limit of the world. *Where in the world is a metaphysical subject to be noted?* You say that this case is altogether like that of the eye and the field of sight. But you do *not* really see the eye. And from nothing *in the field of sight* can it be concluded that it is seen from an eye. . . . Here we see that solipsism strictly carried out coincides with pure realism. The I in solipsism shrinks to an extensionless point and there remains the reality coördinated with it."<sup>4</sup>

I must not convey the impression that the logical positivists use Berkeleyan arguments, or that they arrive at their conclusions by such a train of thought as the above. Nevertheless this may serve to suggest how methodological solipsism comports with a thoroughgoing empiricism; and it further suggests why this procedure is to be taken as having no metaphysical implications. Subjective idealism, consistently carried through, ends by qualifying every substantive with the prefix "idea of" or "experience of", which by being thus universal becomes meaningless. Whereas Berkeley supposes his argument to establish a subjectivist metaphysics by proving the realistic metaphysics to be empty of empirical meaning, logical positivism points out that the contrary of a meaningless assertion is likewise without meaning, and hence repudiates metaphysical theses of both sorts, and the issue itself, as non-significant. Three points, here evident, contain, I think, the gist of the matter. First; when knowledge is envisaged, as it must be, from within the egocentric predicament, all objects known or conceived must reveal themselves as constructions, eventually, from data given in first-person experience. Also, what enters into such construction from past experience can only come in by way of present recollection. (This last is, I take it, the reason for the basic

<sup>4</sup> *Tractatus Logico-Philosophicus*, pp. 151-153. Cf. Carnap, *Logischer Aufbau der Welt* §65.

position of the relation of remembered-similarity in the program of Carnap.) Other selves and their experience, or their reports, can enter only as certain items of first-person experience upon which a peculiarly complex construction is put. Second; distinctions such as that between real and imaginary, or between that which is apprehensible to me alone and the object apprehended by us in common, must nevertheless find their genuine place and importance in such construction. The fact that we make these distinctions in practically useful ways evidences that they are not outside the egocentric predicament and metaphysical but inside it and empirical. They are determined by criteria which the subject can and does apply within his own experience. Berkeley, for example, offered the criterion of independence of my will as the basis for the distinction of real from imaginary. And in Carnap one finds such distinctions, and their empirical criteria, meticulously examined. Third; metaphysical issues concerning the external world and other selves do *not* turn upon such empirically applicable distinctions as those just referred to, which can be applied within first-person experience. Such metaphysical issues can arise only as it is attempted to give some second meaning to the concepts involved; meanings which do not answer to any empirical criteria which the subject can apply within his own experience. Throughout, a particular and critical point is that only first-person (*eigenpsychische*) data of experience are allowed, in the end, to enter into the construction of objects of knowledge or to function as the empirical content of any meaning.

There is, I think, one further question which is crucial for any theory of knowledge; namely, the question of immediacy and mediation, or transcendence. This has a connection with the preceding considerations; but with respect to this further problem I cannot satisfy myself that I elicit any complete and clear pronouncement from the literature of logical positivism. One can pose the principal issue involved by reference to a statement of Russell's: "Empirical knowledge is confined to what we actually observe."<sup>8</sup> This may seem to be a truism; but I think it is in fact

<sup>8</sup> *Our Knowledge of the External World* 112. The author makes this statement quite in passing, and perhaps without having in mind the point with which we are concerned.

thoroughly false, and demonstrably incompatible with the very existence of empirical knowledge. Let us impose this limitation quite rigorously, in conformity with the considerations set forth above. Knowledge is always in the first person; whatever is known must be known to the subject in question, at the actual moment, within his own experience. The experience of others can enter only as certain items of their subject's own—their reports and behavior perceived by him. And the experience of yesterday or tomorrow can figure in this knowing only as it enters, in the form of memory or imagination, into experience here and now. Hence nothing can be known but what is verifiable in the subject's own experience at the moment when the knowing occurs.

Similarly for meaning. Suppose it maintained that no issue is meaningful unless it can be put to the test of decisive verification. And no verification can take place except in the immediately present experience of the subject. Then nothing can be meant except what is actually present in the experience in which that meaning is entertained. Whatever runs beyond this is unverifiable, and hence meaningless. The result of any such train of thought is obvious; knowledge would collapse into the useless echo of data directly given to the mind at the moment, and meaning would terminate in the immediate envisagement of what is meant.

This is a reduction to absurdity of both knowledge and meaning.<sup>6</sup> If nothing can be known but what is literally within the cognitive experience itself, and what is meant can be only that which is present in the experience which is the bearer of that meaning, then there is no valid knowledge and no genuinely significant meaning. Because the *intention* to refer to what transcends immediate experience is of the essence of knowledge and meaning both. Berkeley himself tacitly recognized that, in noting that one idea is "sign of" another which is to be expected; even the skeptic recognizes this intent of knowledge—he is skeptical precisely of

<sup>6</sup>In order to avoid confusion with a quite different problem, the distinction between meaning in the sense of denotation and meaning as connotation should be in mind. It is only the former meaning of "meaning" which is in point in this discussion. In the classification of logical positivism meanings are (1) structural, as in logic and mathematics, or (2) empirical, as in natural science, or (3) emotive, as in art and poetry. It is meaning in sense (2) which is concerned here.

the possibility that what is *not* immediate can be known. If that intention of transcendence is invalid, then the further characters of knowledge and of meaning are hardly worth discussing.

Neither the logical positivists nor anyone else (unless a mystic) intends this reduction to absurdity. But if it is something which has to be avoided by any theory which is compatible with the genuine validity of knowledge, that fact becomes important for the just interpretation of the requirement of empirical meaning. In particular, it becomes evident that the experience in terms of which a cognitive meaning requires to be explicated cannot be exclusively the subject's own given data at the moment of the cognition. Thus that manner of reading the implications of methodological solipsism which is suggested above would condemn that procedure to futility. If what the method requires is that objects known should be constructed or defined exclusively in terms of sense-data actually given to the subject at the moment when the knowing takes place, then that method is incompatible with the possibility of knowledge and the reality of empirical meaning.

We are here faced with a problem which runs through the whole history of post-Kantian epistemology—though it is Berkeley rather than Kant who precipitated it in its modern form. How can the knowledge-relation, or the relation of idea to the object it denotes, be valid unless what is known or meant is present to or in the experience which knows or means? But if what is meant or what is known is merely the cognitive experience itself, or something in it, then how can either knowledge or meaning be genuine?

In general there are three types of solution which have been offered. The first of these is representationalism, according to which the object never literally enters into the experience of the subject. This view recognizes, in at least one sense, the transcendence of the object known or meant; and thus avoids the reduction to absurdity which has been mentioned. The difficulty of this view is, of course, to reconcile such transcendence of the object with the possibility of knowing it. Second, there are identity-theories, both idealistic and realistic, according to which the

object, or the object so far as it is known, is identical with some content of the subject's experience at the moment when the knowing takes place. The outstanding difficulty of this view is to avoid the reduction to absurdity, because it is incompatible with the supposition that anything can be known which lies beyond the immediate experience of the knower.<sup>7</sup> Such identity-theories are also liable to difficulty with the problem of error.

For the third type of theory—which includes both objective idealism and pragmatism—the object known is definable or specifiable in terms of experience, but the experience in terms of which the object is thus definable is not, exclusively, the experience of the subject at the moment of knowing; it transcends that experience. In rough general terms, objective idealism takes this relation between the experience in terms of which the object is specifiable and the experience which cognizes, to be the relation of something *deductively* implied to that in which it is implicit. That is, the present experience in which the knowing occurs—the idea or the given—is taken as determining implicitly the whole object in its reality, and as determining it unambiguously and with certainty, if only we could be explicitly aware of all that is implied. In equally rough terms, pragmatism may be said to take this relation as *inductive*; the given experience of the moment of knowing is the basis of a probability-judgment concerning the experience (or experiences) which would verify, and in terms of which the real nature of the object is expressible.

It would probably be incorrect to take the logical positivists as holding an identity-theory of the cognitive relation.<sup>8</sup> But if they do not, then their conception of the object known, as constructed or 'constituted' in terms of given sense-data, requires to be interpreted so as to avoid an ambiguity which is possible. At this

<sup>7</sup> For an identity-theory of the realistic variety, the object known may transcend the knowing experience—because it is known only in part—but the object so far as it is genuinely cognized cannot.

<sup>8</sup> There could be doubt; for example, Carnap says, "Between 'concepts' and 'objects' there is only a difference in the manner of speech" (*Logischer Aufbau der Welt, Zusammenfassung*, p. 262); and their conception of the relation between physical and mental might be taken to argue an identity-theory. But they have, I think, been principally absorbed in the problem of the *analysis* of the concept (or the object as an intellectual construction), and one should be chary of attempting to elicit from their writings any answer to the present question, which is of a quite different order. At least, I should not wish to presume to do so.

moment I am thinking of the wall behind my back. If I should turn around, I could verify my idea of it. But if at this moment I refer to the wall as a construction from presently given data, then the distinction between 'construction' as present concept, and 'construction' as that which this concept means to denote, is essential. Both are empirical data, if you like—but they are not the same data. The data which have their place in the concept are memories, visual and tactile images, anticipations; the data which would verify this conception would be perceptions. Not only are memories, ideas of imagination, and perceptions different events, but they are empirically distinguishable kinds of experience-content. Either, then, the wall which my idea denotes is merely the imagination-wall or recollection-wall, which is the immediate datum; or I cannot at this moment know the real wall which I mean; or—the third possibility—it is false that what I now know and mean by 'the wall' coincides with any complex of sense-data now in my mind.

It is on this point that the third type of theory is significant. For the pragmatic form of this third type knowing begins and ends in experience; but it does not end in the experience in which it begins. Hence the emphasis on the temporal nature of the knowing process, the leading character of ideas, and the function of knowledge as a guide to action. Knowing is a matter of two 'moments', the moment of assertion or entertainment and the moment of verification; both of these moments belonging to experience in the generic sense of that word. Knowledge will be true or correct only in so far as the present experience—of the entertainment of the meaning—envisages or anticipates correctly the experience or experiences which would verify it; that is, our knowledge is true if the anticipated experience is genuinely to be met with. But the entertaining experience can be truly cognitive, as against a mere enjoyment of itself, only by the fact that what would be realized in the moment of verification is distinct from the experience which entertains or anticipates it. Otherwise error would be impossible—one cannot be mistaken about the immediate—and hence knowledge, as the opposite of error, would likewise be impossible. I do not mean to say, of course, that at the moment when something is believed or asserted it cannot have a ground in

given experience, or be 'partially verified'; but it *is* meant that there must be something more, which is believed in or asserted, than what is verified immediately, if the experience is to have the significance of a knowing as contrasted with an esthetic enjoyment.

The same point can be phrased in another way by reference to the question whether, and in what sense, the datum, by means of which any item of reality is known, is distinct in its being from the cognoscendum.<sup>9</sup>

I should urge that any identity-theory which denies this difference between datum and cognoscendum is incompatible with the cognitive function of the idea or datum. This cognitive function is the guidance of behavior; and in order that the cognizing experience may perform this function there must be at least an element of anticipation or implicit prediction which foreshadows what is *not* here and now present in the datum.

For certain types of realism the problem thus set is taken to be that of the relation between data as items of experience and the reality in its independent existence, which is not any item or complex of items in experience. Pragmatism, in common with idealism and with logical positivism, repudiates the problem in this form as unreal.<sup>10</sup> For all three of these views the relation of datum to cognoscendum is taken to be a relation within experience (in the generic sense), or between one experience and others; not a relation between something in experience and something altogether out of it. The reasons for this attitude would be different in each case; but for all three views the principal ground of this repudiation is the obvious one that a relation of experience to what cannot be brought within experience is a relation which cannot be investigated, and one the very conception of which as cognitive involves a confusion of thought.

All three of these theories would agree that the cognoscendum

<sup>9</sup> I borrow this formulation from the recent discussion of Strong and Lovejoy in the pages of *The Journal of Philosophy*, XXIX (1932) 673-687 and XXX (1933) 589-606.

<sup>10</sup> There may be doubt of this. I do not affirm it dogmatically; but this seems to express the intent of Dewey's denial of "antecedent reality", James's insistence that a thing is what is "known as", and Peirce's pronouncement that our concept of the effects of an object, which have practical bearings, exhausts our whole concept of the object.

must be defined, or constructed, or constituted for knowledge, in terms of experience. But if we are not to fall into the opposite error of the reduction to absurdity, which comes from identifying datum and cognoscendum, it must be recognized that the experience of knowing and the experience in terms of which the object is specified cannot be simply identical.

The very simple point which is pertinent to the further issues of this paper is the fact that although knowledge is subject to the here-and-now predicament—the data must be immediate—it is essential to the cognitive function of the present experience that its cognoscendum should *not* be merely here and now. If, for example, there can be knowledge of a future event in one's own life, then the datum which is the vehicle of this anticipation is not the anticipated cognoscendum. And in so far as all empirical knowing has the dimension of anticipation or implicit prediction, the thing known is not to be identified with, or phrased exclusively in terms of, here-and-now experience. What is known now, *now* has the status of being *verifiable*; but in the nature of the case it does not and cannot have the status of being *verifiable-now*.<sup>11</sup> The only thing which is literally and completely *verifiable-now* is that which is immediate and now-verified.

This account is, of course, hopelessly inadequate, and raises all sorts of questions which cannot be dealt with here. But the points which are directly pertinent to the further discussion are these. (1) The conception that "empirical knowledge is confined to what we actually observe" is false. To know (empirically) is to be able to anticipate correctly further possible experience. If this is not the whole significance of such knowing, at least it is an essential part of it. (2) What is anticipated, known, or meant must indeed be something envisaged in terms of experience—the requirement of empirical meaning stands. But equally it is essential that what is empirically known or meant should *not* be something which is immediately and exhaustively verified, in what I have called the moment of entertainment.

It will also be of importance to consider a little the sense, or

<sup>11</sup> We use the expression "verifiable now" oftentimes in the sense of "verifiable at will". That means literally "verifiable the next moment if I choose to meet certain understood conditions".

senses, of the word 'verifiable'. Like any word ending in 'able', this connotes possibility and hence connotes conditions under which this possibility is supposed to obtain. To advance the dictum that what is empirically known, and what is meant, must be verifiable, and omit all examination of the wide range of significance which could attach to 'possible verification', would be to leave the whole conception rather obscure. But instead of attempting here some pat formulation *a priori*, let us briefly survey different modes of the 'possibility' of the verifying experiences projected by meaningful assertions.

At this moment I have a visual presentation which leads me to assert that my watch lies before me on the table. If what I assert is true, then I could touch the watch, pick it up, and I should then observe certain familiar details which are not discernible at this distance from my eye. This verifying experience is not actual; I do not touch the watch. But nothing is lacking for it except my own initiative. At least I believe that to be the case; and this belief is coördinate with the degree of my felt assurance that the watch is real and is mine. This is, perhaps, the simplest case of verifiability—observability at will. All the conditions of the verifying experience are present except only my intent to make the verification.<sup>12</sup>

Next, let us consider the other side of the moon.<sup>13</sup> This is something believed in but never directly observed. The belief is an inference or interpretation based upon direct observation; the moon behaves like a solid object and must, therefore, have another side. But what is believed in must, in order to be real, possess characters which are left undetermined in our belief about it. For instance, there must be mountains there; or there must be none. To speak more precisely, our belief includes alternatives

<sup>12</sup> Such a single experience would not be a theoretically complete verification of my assertion about the watch. As I have elsewhere indicated, no verification of the kind of knowledge commonly stated in propositions is ever absolutely complete and final. However, an *expected experience* of the watch can be completely verified—or falsified.

<sup>13</sup> It will be obvious that there are modes of verifiability which would fall between the preceding illustration and this one. For example, the verifying experience might be such as could be reached, from actual present conditions, by a more or less complicated chain of circumstances, but a chain every link of which is supposedly related to the preceding one in the manner of the first example.

which are not determined; but, if the thing believed in is what it is believed to be, these alternatives must be *determined in the object*. If there were nothing more, and more specific, to the other side of the moon than what is specifically determined in our construction of it, then it would be a logical abstraction instead of a physical reality. These undetermined characters are what we should see if we could build an X-ray telescope, or what we should find about us if we could construct a space-ship to fly up there and land. What we should observe if these things could be accomplished is what we mean by the other side of the moon as a physically real thing—as something more than a logical construction put upon presently given data.

The projected verification in this case is ideal in a sense which goes quite beyond the preceding example. It is humanly possible, perhaps; men may some day build space-ships or X-ray telescopes. But the conditions of this verification—or any other direct empirical verification of the thing in question—include some which we cannot meet at will. We cannot, by any chain of planned activity, completely bridge the gap between actual conditions and the projected verification. Obviously, then, unless belief in the other side of the moon is meaningless, it is not requisite to such empirical meaning that the verifying experience should even be possible at present, in any narrow interpretation of that word 'possible'. To analyse the conception of 'verifiable' which would extend to such cases would be a large order. I shall only suggest what I think might be some of the critical points. (1) As this example serves to illustrate, any reality must, in order to satisfy our empirical concept of it, transcend the concept itself. A construction imposed upon given data cannot be identical with a real object; the thing itself must be more specific, and in comparison with it the construction remains abstract. In making any verification we expect something which we cannot anticipate. This is a paradox in language; but it is, or should be, a commonplace of the distinction between ideas and objects. (2) In making 'verifiability' a criterion of empirical meaningfulness, the primary reference is to a supposed character of what is conceived rather than to any supposed approximation of the conditions of verification to the actual. (3) The requirement of 'verifiability' for *knowledge* is a stricter one,

because knowing requires, in addition to meaningfulness, some ground of the assurance of truth. But, as this example makes clear, even the 'possible verification' which is requisite to empirical knowing cannot be confined to the practicalities, or by detailed comprehension of the procedure of such verification. We do not command the means for making any direct verification of our belief in the other side of the moon; but what this signifies is that, with all the means in the world, we do not *know how* to. If it be said that it is required for empirical meaning—or even for knowledge—that we should lay down a rule of operation for the process of verification, it should be observed that sometimes this rule of operation will have to be rather sketchy. This difficulty—if it is a difficulty—will be found to affect not only such extreme cases as the other side of the moon but quite commonplace items of knowledge as well.

I join with you in feeling that such considerations smack of triviality; but certainly a theory which could be overturned by such trivial facts would not be worth holding. Just what we can sensibly mean by 'empirically verifiable' is really a bit obscure. Perhaps the chief requirement ought to be that we should be able to analyse the supposed connection between the projected verifying experience and what is actually given (the 'rule of operation') in such wise that this procedure of verification can be envisaged *in analogy with* operations which can actually be carried out. The degree to which such analogy could be made complete would, I think, justly affect the significance of our supposed knowledge.

As a third example let us take the case of the electron. The existence of electrons is inferred from the behavior of oil-droplets between charged plates, tracks registered on photographs of the discharge from cathodes, and other such actually observed phenomena. But what is it that is inferred; or is anything really inferred? Some physicists, for example Bridgman, would say that our concept of the electron comprehends nothing more than these observable phenomena, systematically connected by mathematical equations in verifiable ways. The layman, however, and probably most physicists, would not be satisfied to think of "electron" as merely a name for such observable phenomena. But what more may they suppose themselves to be believing in? An electron is

too small to be seen through any microscope which ever can be made, and it would not stay put if a beam of light were directed upon it. It is equally beyond the reach of the other senses. But is the phrase "too small to be directly perceived" meaningful or is it not? And how direct must a "direct verification" be? Suppose it to be urged that no one can set a limit to scientific inventiveness, or anticipate the surprises which investigation of the subatomic will quite surely present; and that if or when such developments take place, definitely localized phenomena may perhaps be observed within the space to which the mass of the electron is assigned.

Whether this is or is not a question about the real nature of the electron, and what limitations should be imposed on useful conceptions in physics, are matters concerning which I could not have a competent opinion. But there is a general point here which all of us can judge. A hypothetical conception of an empirical reality cannot be definitely ruled out unless we can say categorically that the conditions of its verification could never be realized. Between those conceptions for the verification of which we can definitely specify a rule of operation, and those which we can definitely eliminate as theoretically impossible, there is an enormous gap. And any conception which falls in this middle ground is an hypothesis about empirical reality which possesses at least some degree of meaningfulness. If those who believe in the electron as a sort of ultramicroscopic bullet cannot envisage this object of their belief in such wise that they would be able to recognize certain empirical eventualities as the verification of it, in case the conditions of such verification *could* be met, then they deceive themselves and are talking nonsense. But if they can thus envisage what they believe in, then the fact that such verifying experience is highly improbable, and even that the detail of it must be left somewhat indefinite, is no bar to its meaningfulness. Any other decision would be a doctrinaire attempt to erect our ignorance as a limitation of reality.

The requirement of empirical meaning is at bottom nothing more than the obvious one that the terms we use should possess denotation. As this requirement is interpreted by pragmatists and positivists and others who share the tendencies of thought which have been mentioned, no concept has any denotation at all unless

eventually in terms of sensuous data or imagery. It is only in such terms that a thing meant, or what a proposition asserts, could be recognized if presented to us. But, as the preceding considerations are intended to make clear, the envisagement of what would thus exhibit the denotation or verify the assertion—which is all that meaning requires—has little or nothing to do with the question whether the conditions under which the requisite presentations could be realized can be met or not. Whether such verifying experience is mine or is yours or is nobody's; whether it happens now or in the future or never; whether it is practically possible or humanly problematic or clearly beyond our capacity to bring about—all this is beside the point when the only question is that of theoretical meaningfulness.

One may be tempted, in protest against various forms of transcendentalism and verbalism, to announce the unqualified dictum that only what is verifiable can be known, and only what is knowable can be the subject of a meaningful hypothesis. But such flat statement, while true in general, may nevertheless be misleading on account of an ambiguity in the word 'verifiable'. On the one hand this connotes a certain character of the content of one's assertion or hypothesis. This must be envisaged in sensuous terms; it must be the case that we could recognize certain empirical eventualities as verifying it, supposing that the conditions of such verifying experience could be satisfied. Verifiability in this sense requires an empirical *content* of the hypothesis, but has nothing to do with the practical or even the theoretical difficulties of verification. Whatever further restrictions may be appropriate in physics or any other natural science, the only general requirement of empirical meaning—which alone is pertinent to those hypotheses about reality which philosophy must consider—is this limitation to what can be expressed in terms which genuinely possess denotation.

On the other hand, 'verifiable' connotes the possibility of actually satisfying the conditions of verification. Or, to put it otherwise, verifiability may be taken to require 'possible experience' *as conditioned by the actual*; we must be able to find our way, step by step, from where we actually stand to this verifying experience. Hence practical or theoretical difficulties are limitations of verifi-

ability in this second sense. These limitations may be genuinely pertinent to knowledge, because *knowledge* requires the *assurance of truth*; and whatever would prevent actual verification may prevent such assurance. But verifiability in this second sense has no relevance to meaning, because the assurance of truth is, obviously, not a condition of meaningfulness.

It is of importance to avoid confusing these two senses of 'verifiable' in assessing the significance of those considerations which methodological solipsism makes prominent. If it could be said that actual knowing must rest upon verification which, in the end, must be first-person and must be here and now when the knowing occurs, at least it would be an absurdity to translate this into the negation of meaning to whatever cannot be expressed in terms of first-person experience and of experience here and now. I impute this absurdity to no one; I would merely urge the necessity of avoiding it.

It is likewise important, in the same connection, to bear in mind what have been called the two moments of cognition. It is a fact that past experience is a given datum only in the form of memory; the future, only in the form of imagination. And the reports of others are data for the knower only in that form in which they lie within the egocentric predicament. Hence any idea which can occur with cognitive significance must be a construction by the knower, ultimately in terms of first-person present data. These predicaments, however, are limitations of the moment of entertainment. If one should conclude that because the cognizing experience must take place within the boundaries of the first-person and the immediate, therefore the object of that knowledge, so far as it is genuinely known or meant, must also lie within those limits, one would be overlooking the distinction between the experience which entertains and the projected experience which would verify what is thus entertained. The distinction of these two is of the essence of cognition as contrasted with esthetic enjoyment of the immediate. To identify them would be to reduce knowledge and meaning to absurdity. Again, I do not impute to anyone this identification of the idea, in terms of immediate data, with the object, specifiable in terms of possible experience or experience which is anticipated. I would only urge the desirability of avoiding this fallacy.

In the time which remains it is a bit absurd even to suggest any bearings which the above may be supposed to have upon metaphysical problems. But with your indulgence I shall barely mention three such issues.

One traditional problem of metaphysics is immortality. The hypothesis of immortality is unverifiable in an obvious sense. Yet it is an hypothesis about our own future experience. And our understanding of what would verify it has no lack of clarity. It may well be that, apart from a supposed connection with more exigent and mundane problems such as those of ethics, this hypothesis is not a fruitful topic of philosophic consideration. But if it be maintained that only what is scientifically verifiable has meaning, then this conception is a case in point. It could hardly be verified by science; and there is no observation or experiment which science could make, the negative result of which would disprove it. That consideration, however, has nothing to do with its meaningfulness as an hypothesis about reality. To deny that this conception has an empirical content would be as little justified as to deny empirical content to the belief that these hills will still be here when we are gone.

Next let us consider that question about the external world, supposedly at issue between idealists and realists. One suspects that the real animus of debate between these two parties is, and always has been, a concern with the question of an essential relationship between cosmic processes and human values; and that if, historically, idealists have sought to capture their conclusion on this point by arguments derived from a Berkeleyan or similar analysis of knowledge, at least such attempt has been abandoned in current discussion. So that this question about the external world, in any easily storable form, is probably not pertinent to present controversy. But there is one formulation which, if it is too naïve to be thus pertinent, at least poses an intelligible question about the nature of reality. Let us phrase this as a realistic hypothesis: If all minds should disappear from the universe, the stars would still go on in their courses.

This hypothesis is humanly unverifiable. That, however, is merely a predicament, which prevents assurance of truth but does not affect meaning. We can only express or envisage this hypothesis

by means of imagination, and hence in terms of what any mind like ours *would* experience if, contrary to hypothesis, any mind *should* be there. But we do not need to commit the Berkeleyan naïveté of arguing that it is impossible to imagine a tree on a desert island which nobody is thinking of—because we are thinking of it ourselves. It is entirely meaningful, for example, to think of those inventions which nobody has ever thought of, or those numbers which no one will ever count; we can even frame the concept of those concepts which no one will ever frame. Those who would deny this on logical grounds exhibit a sense for paradox of language which is stronger than their sense of fact. Furthermore, *imagination* is sufficient for empirical meaning, though it requires *perception* for verification. I can imagine that future time which I shall never perceive; and humans can meaningfully think of that future when humanity may have run its cosmic course and all consciousness will have disappeared. It may be that the hypothesis of a reality with no sentience to be affected by it is not a particularly significant issue; though the idealist might have an interest in it for the sake of the light which decision about it would throw upon the nature which reality has now. In any case, the fact that it is unverifiable has no bearing upon its meaningfulness. Whether this hypothesis is true, is a genuine question about the nature of reality.

Finally, we may turn to the conception of other selves. The importance which this topic has for ethics will be obvious. Descartes conceived that the lower animals are a kind of automata; and the monstrous supposition that other humans are merely robots would have meaning if there should ever be a consistent solipsist to make it. The logical positivist does not deny that other humans have feelings; he circumvents the issue by a behavioristic interpretation of "having feelings". He points out that your toothache is a verifiable object of my knowledge; it is a construction put upon certain empirical items which are data for me—your tooth and your behavior. My own toothache is equally a construction. Until there are such prior constructions as the physical concept "teeth", from given sense-data, neither your toothache nor mine is a possible object of knowledge. And, similarly, until there is a construction involving such prior constructions as human bodies, there is no

own-self or yourself as particular objects of knowledge. As knowable things, myself and yourself are equally constructions; and though as constructed objects they are fundamentally different in kind, the constructions are coördinate. That experience which is the original datum of *all* such constructions is, in Carnap's phrase, "without a subject".<sup>14</sup> Nevertheless it has that quality or status, characteristic of all given experience, which is indicated by the adjective "first-person".

With the general manner of this account of our knowledge of ourselves and others I think we should agree. But it does not touch the point at issue. Suppose I fear that I may have a toothache tomorrow. I entertain a conception involving various constructions from present data; my body, teeth, etc. But my present experience, by which I know or anticipate this future toothache, is not an experience of an *ache*. There is here that difference which has been noted between the experience which entertains and the experience which would verify, to which it implicitly refers. A robot could have a toothache, in the sense of having a swollen jaw and exhibiting all the appropriate behavior; but there would be no pain connected with it. The question of metaphysical solipsism is the question whether there is any pain connected with your observed behavior indicating toothache. The logical positivist claims that this issue has no meaning, because there is no empirical content which could verify the non-solipsistic assertion—that is, no content unless, following his procedure, I identify your pain with observable items such as the behavior which exhibits it; in which case it is verifiable in the first person. To make this identification, however, is to beg precisely the point at issue.

Let us compare the two cases of your toothache now and my toothache tomorrow. I cannot verify your toothache, as distinct from your observable behavior, because of the egocentric predicament. But neither can I verify my own future toothache—because of the now-predicament. My tomorrow's pain, however, may genuinely be an object of knowledge for me now, because a pain may be cognized by an experience in which that pain is not a given ingredient. (The imagination of a pain may be painful; but it is not the pain anticipated. If it were, all future events which

<sup>14</sup> See *Logischer Aufbau der Welt* § 65.

we anticipate would be happening already.) *Your* pain I can *never* verify. But when I assert that you are not an automaton, I can envisage what I mean—and what makes the difference between the truth and falsity of my assertion—because I can imagine your pain, as distinct from all I can literally experience of you, just as I can imagine my own future pain, as distinct from the experience in which I now imagine it.

In the nature of the case I cannot verify you as another center of experience distinct from myself. Any verification which I might suppose myself to make would violate the hypothesis by being first-person experience. But there is nothing to which I can give more explicit empirical content than the supposition of a consciousness like mine connected with a body like my own. Whether there is any such would be a terribly important question about reality if anybody entertained a doubt about the answer. Whether you are another mind or only a sleep-walking body is a question of fact. And it cannot be exorcized by definitions—by defining ‘meaningful’ so as to limit it to the verifiable, and ‘verifiable’ by reference to the egocentric predicament.

This conception of other selves as metaphysical ultimates exemplifies the philosophic importance which may attach to a supposition which is nevertheless unverifiable on account of the limitations of knowing. Though empirical meaning is requisite to theoretical significance—and that consideration is of first importance in guarding against verbal nonsense in philosophy—still the sense in which a supposition is meaningful often outruns that in which the assurance of truth, by verification, can genuinely be hoped for. In limiting cases like this last question it may even outrun the possibility of verification altogether.

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